

4. CLOSURE OF UNDERGROUND TANKS.

The Union Switch & Signal Division of American Standard removed thirty five (35) tanks at it's Swissvale Property. The Project was conducted in two (2) phases.

The first phase was the removal, cleaning, and disposal of (19) Steel Storage Tanks. This work was further broken down into three areas.

1. Five (5) 20,000 gallon #2 Fuel Oil Tanks
2. Two (2) Gasoline tanks; 10,000 and 1,000 gallons
3. Twelve (12) Process Oil Tanks

Work began on the five (5) 20,000 Gallon #2 Fuel Oil Tanks on December 9, 1985. New England Pollution Control Co., Inc. (NEPCCO) performed the excavation work.

The soil overlying the tanks was first excavated and stockpiled on plastic. NEPCCO personnel then entered the tanks to remove any residual product and to pressure wash them. The tanks were exhumed and placed on plastic where a hole was burned in each to certify that they had been cleaned. They were then cut up and disposed of offsite as scrap. Similar procedures were used with respect to all (19) tanks.

After exhumation, composite samples were taken from the excavation. These samples were sent to the International Technologies Labs in Export, Pennsylvania for Total Petroleum Hydrocarbon (TPH) Analysis.

There were four composite samples taken around the excavation. They were labeled P-1 Southwest Corner, P-2 Northwest Corner, P-3 Southeast Corner, and P-4 Northeast Corner. The results were as follows:

P-1	340 ppm	TPH
P-2	140 ppm	TPH
P-3	260 ppm	TPH
P-4	53/41 ppm	TPH

The excavated soil was placed back in the excavation along with the overlying soil. The reintroduced soil was permitted to settle and then was rolled and the site was closed on December 12, 1985.

Two gasoline tanks, one 10,000 gallons and the second 1,000 gallons were removed from area two on December 12, 1985.

Composite samples were taken from the North, South, East, and West sides, of the excavation. These samples were labeled P-5, P-6, P-7, and P-8. The results are as follows:

P-5	62	ppm	TPH
P-6	82	ppm	TPH
P-7	110	ppm	TPH
P-8	84	ppm	TPH

In addition to the four samples sent to the I.T. Labs, one composite sample was taken from the four sides of the excavation, sent to Intech Biolabs, 158 Tides Lane, East Brunswick, New Jersey 08816, and analysed for TPH. The analysis indicated 20 ppm TPH.

The soil was placed back into the excavation and work was completed on December 12, 1985.

The work on the third area containing twelve (12) process oil tanks began December 13, 1985.

Four composite samples from the excavation were taken and labeled P-9, P-10, P-11, and P-12 and sent to the I.T. Labs for TPH Analysis. The results were as follows:

P-9	20	ppm	TPH
P-10	45	ppm	TPH
P-11	11	ppm	TPH
P-12	11	ppm	TPH

In addition to the TPH Analysis done by I.T. Labs ne composite sample was analyzed for P C B 's by Intech Biolabs. No P C B 's were found. The excavation was closed December 16, 1985. 967 gallons of residual product and rinsate from the pressure washing of all (19) steel storage tanks were disposed of as a Waste Flammable Liquid, N.O.S., Flammable Liquid U.N. 1993 at Standard Tank Corporation's Bayonne, New Jersey facility, (ref.Exhibit 4.1 State of New Jersey Manifest Number NJA0099283 attached).

The second phase of the closure of underground tanks project was the removal and disposal of fifteen (15) concrete vaults, whose total capacity was 306,000 gallons. First, of 200,000 gallons of non-hazardous flyash slurry was removed from the vaults, dewatered using the Waste Treatment Plant Filter Press and drummed for disposal. This work was performed during January through April, 1986.

The drums of flyash were transported to Michigan Disposal, Inc. in Belleville, Michigan for disposal (ref. Exhibit 4.2 Michigan State Manifest Numbers 0797208, 0821705, and 0797209) on May 8, 1986 by Buffalo Fuels Corporation.

I. T. Corporation began work on the demolition and removal portion of the project on April 22, 1986 following removal of the flyash. Prior to demolition of the vaults, hydroblasting was performed to remove any residues from the vaults interior. The rinsate from the hydroblasting was processed through the plant's Wastewater Treatment Plant.

The concrete was completely demolished and staged at the north end of the excavation by May 6, 1986. On May 8, 1986, (21) soil samples from beneath the slab were analyzed for TPH. Results from these samples range from 270 ppm to 4,600 ppm. TPH (ref. Exhibit 4.3 "Table #1"). On May 13, 1986, (18) additional soil samples and one water sample were taken from around the perimeter of the excavation.

Analysis showed the water sample to be clean (ref. Exhibit 4.4 Table #2). The additional soil sample results taken from the perimeter ranged from 12 ppm to 9,000 ppm TPH (ref. Exhibit 4.5. "Table #3"). A PCB composite sample was also taken and results showed no PCB's present (ref. Exhibit 4.6 "Table #4").

On May 15, 1986, I.T. Corporation removed soil to a depth of six feet under the bottom of the slab and out to the boundaries of the excavation. This soil was staged at the South end of the excavation. The filling of the excavation began on May 29, 1986, with fill material being supplied by Kennedy Contracting Company, Pittsburgh, PA, and was completed August 30, 1986.

From July 28, 1986 to August 7, 1986 approximately 1,500 tons of concrete, rebars, and soil which was used to line the truck beds were transported to Suburban Landfill Newark, Ohio for disposal as a Non-Hazardous Waste. (ref. Exhibit 4.7 Ohio EPA Solid Waste Disposal Questionnaire 5-29-86 and Ohio EPA letter 6-30-86).

Remaining unused soil was spread to a thickness of less than one foot. The soil was fertilized with a high nitrogen content fertilizer to promote biodegradation. Hydrocarbon concentrations in the soils were decreased significantly as aeration and tilling of the material was performed. Additional samples were taken of the spread soil on August 15, 1986, March 25, 1987, and June 26, 1987.

The results are as follows:

August 15, 1986 130 & 240 ppm (ref.Exhibit 4.8)

March 25, 1987 104 ppm (ref. Exhibit 4.9)

June 24, 1987 78 ppm (ref. Exhibit 4.9)

The project was totally completed as of June 26, 1987.

DNR

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE

ATT. ☐ DIS. ☐ REJ. ☐

1079, as amended and Act 136, P.A. 1989.

Failure to file is punishable under section 230.548 MCL or Section 10 of Act 136, P.A. 1989.

Exhibit 4.2

Please print or type.

Form Approved OMB No. 2000-0404 Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address Union Switch & Signal Div. P.O. Box 420 Pittsburgh, Pa. 15230		PA 10 00 00 00 11 2 3		State Manifest Document Number MI 0797208		
4. Generator's Phone (412) 244-3183		6. US EPA ID Number INX1D0518101919572		State Generator's ID MI 0797208		
5. Transporter 1 Company Name Bu Dale Truck Corp.		8. US EPA ID Number		State Transporter's ID MI 0797208		
7. Transporter 2 Company Name		10. US EPA ID Number		State Transporter's ID MI 0797208		
9. Designated Facility Name and Site Address MICHIGAN Disposal, Inc. 49350 N. Salsburg Drive Bellville, Mich 48111		10. US EPA ID Number MI 10010107241831		State Facility's ID MI 0797208		
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER)		12. Containers	13. Total Quantity	14. Unit	15. Waste No.	N/H
a. New Hazardous Flyash		No.	Type	Quantity	Unit	
b.						
c.						
d.						
16. Additional Descriptions for Materials Listed Above		17. Handling Codes for Wastes Listed Above		a/		1
		Approval 8374		b/		1
				c/		1
				d/		1
15. Special Handling Instructions and Additional Information						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.						
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage or disposal currently available to me which minimizes the present and future threat to human health and the environment.						
Printed/Typed Name M. O. Tardel		Signature M. O. Tardel		Date 05/01/86		
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature [Signature]		Date 05/01/86		
Printed/Typed Name [Name]		Signature [Signature]		Date 05/01/86		
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature [Signature]		Date 05/01/86		
Printed/Typed Name [Name]		Signature [Signature]		Date 05/01/86		
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.						
Printed/Typed Name [Name]		Signature [Signature]		Date 05/01/86		

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-282-4708 OR OUT OF STATE AT 617-375-7600 AND THE NATIONAL RESPONSE CENTER 800-424-9302 24 HOURS PER DAY.

DNR ATT. ☐ DIS. ☐ REJ. ☐

Failure to file is punishable under
section 299.64B MCL or Section 10 of
Act 136, P.A. 1989.

Form Approved OMB No 2000-0404 Expires 7-31-86

Please print or type

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.		Manifest Document No.		2. Page 1 of		Information in the shaded areas is not required by Federal law.											
3. Generator's Name and Mailing Address Union Smith & Son, Inc. 4000 S. L. & D. Ave. SL & D. PO Box 490 Pittsfield, MA 01203						A. State Manifest Document Number MI 0821705													
4. Generator's Phone (912) 244-3183						B. State Generator's ID													
5. Transporter 1 Company Name Buffalo Trench Corp.						C. State Transporter's ID MI 0000000000													
7. Transporter 2 Company Name						D. Transporter's Phone (912) 244-3183													
9. Designated Facility Name and Site Address MICHIGAN DRYCLE INC. 49850 N. Service Drive Battle Creek, Mich 48711						E. State Transporter's ID													
10. US EPA ID Number MI 0000000000						F. Transporter's Phone													
11. US DOT Description (including Proper Shipping Name, Hazard Class, and HM)						12. Containers		13. Total Quantity		14. Unit W/Vol		15. Waste No.		N/H					
a. Non-Hazardous Aqueous						158 Drums		377100		P		SILIND							
b.																			
c.																			
d.																			
J. Additional Descriptions for Materials Listed Above						K. Handling Codes for Wastes Listed Above Aqueous H 2374						a/ 1		b/ 1		c/ 1		d/ 1	
15. Special Handling Instructions and Additional Information																			
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage or disposal currently available to me which minimizes the present and future threat to human health and the environment.																			
Printed/Typed Name M D Tourtel												Signature M D Tourtel				Date 05/08/86			
17. Transporter 1 Acknowledgement of Receipt of Materials																			
Printed/Typed Name DARYL QUINZIO												Signature Daryl Quinzio				Date 05/08/86			
18. Transporter 2 Acknowledgement or Receipt of Materials																			
Printed/Typed Name												Signature				Date			
19. Discrepancy Indication Space																			
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.																			
Printed/Typed Name												Signature				Date			

ALL SPILLS BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN, 424-6802 24 HOURS PER DAY.

DNR
MICHIGAN DEPARTMENT
OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE

ATT. ☐ DIS. ☐ REJ. ☐

1979, as amended and Act 136, P.A. 1986.
 Failure to file is punishable under section 290.548 MCL or Section 10 of Act 136, P.A. 1986.

Exhibit 4.2

Please print or type.

Form Approved OMB No. 2000-0404 Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address Union Switch & Signal Div. P.O. Box 420 Pittsburgh, Pa. 15230		4. Generator's Phone (412) 241-3183		A. State Manifest Document Number MI 0797209	
5. Transporter 1 Company Name Bullard Forks Corp.		6. US EPA ID Number IN YD 051180191575		C. State Transporter's ID IN 111111	
7. Transporter 2 Company Name		8. US EPA ID Number		D. Transporter's Phone 714-722-1121	
9. Designated Facility Name and Site Address MICHIGAN DRYWALL INC 44350 N. S. 3000 Dr Belleville Mich 48111		10. US EPA ID Number MI D 00007241831		E. State Transporter's ID IN 111111	
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER) HM Non Hazardous Flyash		12. Containers No. Type	13. Total Quantity	14. Unit M/Vol	15. Waste No. WM
J. Additional Descriptions for Materials Listed Above		K. Handling Codes for Wastes Listed Above Approval H 2374		a/ 1 b/ 1 c/ 1 d/ 1	
15. Special Handling Instructions and Additional Information					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage or disposal currently available to me which minimizes the present and future threat to human health and the environment.					
Printed/Typed Name MD Toward		Signature <i>[Signature]</i>		Date DECEMBER 16	
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature <i>[Signature]</i>		Date 5/1/86	
18. Transporter 2 Acknowledgement or Receipt of Materials		Signature		Date	
19. Discrepancy Indication Space					
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.					
Printed/Typed Name		Signature		Date Month Day Year	

ALL SPILLAGE MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MI AT 1-800-252-4709 OR OUT OF STATE AT 517-373-7000 AND THE NATIONAL RESPONSE CENTER 1-800-424-8822 24 HOURS PER DAY.

TABLE 1
TOTAL HYDROCARBON ANALYSIS SUMMARY
FOR UNION SWITCH & SIGNAL
PROJECT NO. 305009

SAMPLE IDENTIFICATION	TOTAL HYDROCARBON mg/kg ⁽¹⁾
USS-001S	2800
USS-002S	1700
USS-003S	3600
USS-004S	4000
USS-005S	1200
USS-006S	3700
USS-007S	1300
USS-008S	4600
USS-009S	690
USS-010S	1200/740
USS-011S	440
USS-012S	490
USS-013S	780
USS-014S	1100
USS-015S	410
USS-016S	150
USS-017S	240
USS-018S	1500
USS-019S	1000
USS-020S	3200/2400
USS-021S	270

⁽¹⁾mg/kg = milligrams per kilogram or parts per million.

TABLE 2

TOTAL HYDROCARBON ANALYSIS SUMMARY
FOR UNION SWITCH & SIGNAL
PROJECT NO. 305009

SAMPLE IDENTIFICATION	TOTAL HYDROCARBON mg/l ⁽¹⁾
USS-001W	1.0

⁽¹⁾mg/l = milligrams per liter or parts per million.

TABLE 3
TOTAL HYDROCARBON ANALYSIS SUMMARY
OF SOIL SAMPLES
FOR UNION SWITCH & SIGNAL
PROJECT NO. 305009

SAMPLE IDENTIFICATION	TOTAL HYDROCARBON mg/kg ⁽¹⁾
USS-023S	12
USS-024S	150
USS-025S	20/38 ⁽²⁾
USS-026S	92
USS-027S(A)	160
USS-027S(B)	150
USS-028S	2000
USS-029S	29
USS-030S	1000
USS-031A	1700
USS-031B	20
USS-032	1600/2500
USS-033A	9000
USS-033B	1300
USS-034A	1500
USS-034B	1600
USS-035A	60
USS-035B	1200

(1) mg/kg = milligrams per kilogram or parts per million.

(2) The indicated samples were analyzed in duplicate.

TABLE 4

RESULTS OF POLYCHLORINATED BIPHENYL (PCB)
ANALYSIS OF SOIL SAMPLE
FOR UNION SWITCH & SIGNAL
PROJECT NO. 305009

SAMPLE IDENTIFICATION	mg/kg ⁽²⁾	PCB CONCENTRATION ⁽¹⁾	SOURCE AROCLOR ⁽³⁾
USS-020	<1.0		(3)

-
- (1) Method blanks were consistently <1.0 mg/kg polychlorinated biphenyl.
- (2) Reported values were not corrected for percent recovery, mg/kg = milligrams per kilogram or parts per million.
- (3) Indicates when PCBs are detected, the source of the PCB contamination and the commercial aroclor mixture used for quantitation. All samples were screened for Aroclors 1016, 1221, 1232, 1242, 1248, 1254, and 1260 to determine whether PCBs were present and which aroclor standards were required for instrument calibration.



State Of Ohio Environmental Protection Agency

Northeast District Office
2110 E. Aurora Road; Twinsburg, Ohio 44087-1969

(216) 425-9171

Exhibit 4.7



Richard F. Celeste, Governor

June 30, 1986

RE: SOLID WASTE
MAHONING COUNTY
CENTRAL WASTES LANDFILL

Mr. Dave Tourdof
Union Switch & Signal
Braddock Avenue
Swissvale, Pennsylvania 15218

Dear Mr. Tourdof:

This letter is in response to your correspondence dated June 5, 1986, regarding the proposed disposal of industrial waste at the above-referenced landfill. The waste in question is generated at Union Switch & Signal plant, Swissvale, Pennsylvania and is concrete fuel storage tanks and adjoining soil.

The submitted analysis shows the waste to be nonhazardous under the E.P. Toxicity criteria and the generator has stated that it is not a hazardous or toxic waste under Ohio or Federal regulations. The waste has a minimum solids content of 30% and will be disposed at a rate of 5600 total tons. Having considered the information submitted regarding the waste, this office does not object to its disposal at the Central Wastes, Inc., Landfill provided:

1. The generator and landfill operator are fully aware of the Ohio and Federal hazardous waste regulations and they have determined this waste to be nonhazardous.
2. The disposal of this waste causes no operational difficulties at the landfill.
3. The waste contains no free standing liquids.
4. The waste is in a solid state.
5. The waste is disposed where the operator specifies.
6. The disposal of this waste does not violate any condition of the landfill's Permit to Install.

We hope this clarifies our position on this matter. Should any questions arise, please do not hesitate to contact this office.

Sincerely,

Mark F. Schmidt
Environmental Engineer 3
Division of Solid & Hazardous Waste Management

MFS:mjo

cc: Mahoning CHD
Ed Kitchen, DSHWM, CO
Central Wastes Landfill
Attn: John Tomci

SOLID WASTE DISPOSAL QUESTIONNAIRE

Exhibit 4.7

1) Proposed Disposal Facility: Central Wastes, Inc.
2240 S. Union Ave.
Alliance, Ohio 44601

2) Generator's Name: Union Switch and Signal

3) Mailing Address: Braddock Avenue, Swissvale, PA 15218

4) Phone No.: (412) 244-3183 5) Company Contact Dave Tourdof

6) Plant and/or Waste Site Location: Union Switch and Signal, Swissvale, PA

7) Generator's SIC Code(s): 3843

8) Accurate description of the process generating the waste(s):

Concrete fuel storage tanks and adjoining soil.

9) Is this a hazardous waste as defined by Ohio or Federal regulations?

YES X NO. If "YES", Please explain further in an attachment. If this waste is not generated in Ohio, is it considered a hazardous waste in the State it is generated in? YES X NO. If "YES", Please explain further in an attachment. Is this waste regulated under the Federal TOSCA regulations? YES X NO.

10) Has the proposed Waste Disposal Facility been contacted? X YES NO.

11) Please attach to this form a copy of a recent (within 6 months) E.P.Toxicity analysis of a representative sample of the waste in question. Also include the minimum percent solids content of the waste.

12) When the waste arrives at the disposal site, will it: (a) be homogeneous?

X YES NO (b) be stratified?, YES X NO (c) contain any free standing liquids?
YES X NO.

13) Will the waste material be disposed in X BULK DRUMS OTHER (attach explanation)

Quantity of waste: (a) _____ Total drums _____ maximum drums/day
(b) 4586 _____ Total tons _____ max. tons/day _____ max. cubic yards/day.
Duration of the disposal project: _____ Two Weeks

Transporter's name _____ Wills Trucking, Inc.

Transporter's Address: _____ 3185 Columbia Road, Richfield, OH 44286

Transporter's Phone No.: (216) 659-9381

Laboratory's name: _____ IT Analytical Services

Laboratory's Phone No.: (412) 731-8806

Is the Laboratory certified by either State or Federal EPA? ☒ YES ☐ NO.

Certification (To be notarized)

I certify that I have personally examined and, am familiar with, the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

SIGNATURE _____

V. K. Srivastava

DATE _____

5-29-86

PRINT OR TYPE NAME _____

V. K. Srivastava

Company Name _____

IT Corporation

Mailing Address _____

10 Duff Road

Pittsburgh, PA 15235

Telephone Number (412) 243-3230



Laboratory Services Division
8350 Campbells Run Road
Pittsburgh, PA 15205

REMIT TO:
Park West Two
Cliff Mine Road
Pittsburgh, PA 15275

412-788-1080

Exhibit 4.8

LAB ANALYSIS REPORT

CLIENT NAME: UNION SWITCH & SIGNAL
ADDRESS: 1789 SOUTH BRADDOCK AVENUE
SWISSVALE, PA 15218

NUS CLIENT NO: 340801

VENDOR NO: 05765200

WORK ORDER NO: 55830

DATE RECEIVED: 08/15/86

REPORT DATE: 08/26/86

ATTENTION: MR. DAVE TOURNET

SAMPLE IDENTIFICATION

NUS SAMPLE NO

RESULTS

UNITS

COMPOSITE SOIL SAMPLE
DM75 Hydrocarbon IR Scan

08/08 #1

16080761

130

PPM

COMPOSITE SOIL SAMPLE
DM75 Hydrocarbon IR Scan

08/08 #2

16090762

240

PPM

COMMENTS:

Reviewed and Approved by: JMC

PTL - INSPECTORATE INC.**PITTSBURGH DISTRICT**
600 PENNSYLVANIA AVENUE
PITTSBURGH, PENNSYLVANIA 15222
TEL 412 922 4000
FAX 412 922 4000**REPORT**Laboratory No. 887828
Client No. S78857-0ORDER NO. PCH-530
DATE July 24, 1987

Client : Union Switch and Signal Division
American Standard Inc.
1789 South Braddock Avenue
Swissvale, PA 15218

Sample Description : Two (2) Jars of Soil
Identified as 3/25/87 and 6/24/87

Submitted By : Client

Submitted To : PTL-Inspectorate Inc., Chemical Department

Method of Test : Standard Methods, 16th Edition, Method No. 503
Infrared Spectroscopy

Reported To : Union Switch and Signal Division
Attention: M. D. Tourdot

Two jars of soil, identified by the client as "3/25/87 Soil" and "6/24/87 Soil", were submitted to this laboratory for determination of the presence of hydrocarbon oil.

The samples were dried and extracted according to Standard Methods, 16th Edition, Method No. 503. Quantitative evaporation and extraction of the samples with trichlorotrifluoroethane resulted in the following:

Sample Identification	Solids Content (Weight Percent)	Water Content (Weight Percent)	Trichlorotrifluoroethane Solubles (ppm, calculated on Dry Solids Basis)
3/25/87 Soil	85.5	14.5	104
6/24/87 Soil	88.6	11.4	78

Union Switch and Signal Div.
July 24, 1987
Page 2 of 2

Order No. PCH-530
Lab. No. 887828

The trichlorotrifluoroethane solubles were examined using infrared spectral procedures for identification with the following results:

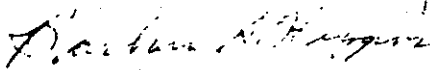
Sample Identification

3/25/87 Soil
6/24/87 Soil

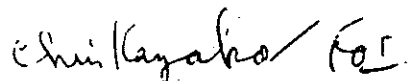
Composition of
Trichlorotrifluoroethane
Solubles

Petroleum hydrocarbon oil
Petroleum hydrocarbon oil

Prepared By:


Barbara A. Higgins
Senior Chemist/Spectroscopist

Reviewed and Approved By:


William S. Carlson, Manager
Chemical Department

2-Client

bmm/ear